IN THE CLAIMS

Cancel claims 60-63.

Amend claims 51-59 and 64, as follows.
Add new claim 65 as follows.

1-50. (canceled)

51. (currently amended) An optically detectable security feature comprising:

at least one rare earth dopant having an intrinsic set of energy levels;

a glass or plastic particle incorporating the at least one rare earth dopant, where interaction between the particle and the at least one rare earth dopant is such that the intrinsic set of energy levels is modified to provide a new electronic energy level profile that allows transitions different to those allowed by either the rare earth dopant by itself or the undoped glass or plastic particle; and

a security profile associated with the new electronic energy level profile, where the security profile comprises (i) a ratio of emission intensities at a plurality of pre-determined wavelengths of the doped glass or plastic particle, and (ii) an emission lifetime at one of the plurality of pre-determined wavelengths which is different to an emission lifetime at another of the plurality of pre-determined wavelengths ~~different emission lifetimes at the plurality of pre-determined wavelengths~~.

52. (previously presented) The optically detectable security feature of claim 51 wherein the glass or plastic particle is a borosilicate glass particle.

53. (previously presented) The optically detectable security feature of claim 51 wherein the glass or plastic particle is a microbead.

54. (previously presented) The optically detectable security feature of claim 51, wherein the security profile is responsive to excitation at a pre-determined

wavelength between 395nm and 535nm.

55. (currently amended) A security media comprising:

a media;

an optically detectable security feature incorporated within the media, the feature comprising:

______at least one rare earth dopant having an intrinsic set of energy levels;

______a glass or plastic particle incorporating the at least one rare earth dopant, where interaction between the particle and the at least one rare earth dopant is such that the intrinsic set of energy levels is modified to provide a new electronic energy level profile that allows transitions different to those allowed by either the rare earth dopant by itself or the undoped glass or plastic particle; and

______a security profile associated with the new electronic energy level profile, where the security profile comprises (i) a ratio of emission intensities at a plurality of pre-determined wavelengths <u>of the doped glass or plastic particle</u>, and (ii) <u>an emission lifetime at one of the plurality of pre-determined wavelengths which is different to an emission lifetime at another of the plurality of pre-determined wavelengths</u> ~~different emission lifetimes at the plurality of pre-determined wavelengths~~.

56. (previously presented) The security media of claim 55 wherein the media comprises a fluid.

57. (previously presented) The security media of claim 55 wherein the media comprises a document.

58. (currently amended) A method of preparing an optically detectable security feature of increased difficulty for unauthorized reproduction for purposes of counterfeiting, the method comprising:

selecting a glass or plastic carrier and a plurality of rare earth dopants such that when the rare earth dopants are incorporated into the glass or plastic ~~particle~~ <u>carrier</u>, interaction between the ~~particle~~ <u>carrier</u> and the at least one rare earth dopant is such that a

security profile is provided based on a plurality of pre-determined emission wavelengths that differ from emission wavelengths of either the rare earth dopants or the glass or plastic ~~particle~~ carrier;

~~incorporating the plurality of rare earth dopants into the glass or plastic carrier;~~

creating particles comprising the~~of~~ glass or plastic carrier incorporating the plurality of rare earth dopants, such that each particle exhibits a security profile comprising (i) a ratio of emission intensities at a plurality of pre-determined wavelengths of the doped glass or plastic particle, and (ii) an emission lifetime at one of the plurality of pre-determined wavelengths which is different to an emission lifetime at another of the plurality of pre-determined wavelengths ~~different emission lifetimes at the plurality of pre-determined wavelengths~~.

59. (currently amended) A method of validating an item having an optically detectable security feature comprising at least one rare earth dopant having an intrinsic set of energy levels, where each of the at least one rare earth dopant is incorporated in a glass or plastic particle and interaction between the particle and the at least one rare earth dopant is such that the intrinsic set of energy levels is modified to provide a new electronic energy level profile that allows transitions different to those allowed by either the rare earth dopant by itself or the undoped glass or plastic particle, the method comprising:

illuminating the security feature at an excitation wavelength to produce emissions from the at least one rare earth dopant;

detecting emissions from the security feature at a plurality of pre-determined wavelengths allowed by the new electronic energy level profile;

ascertaining a ratio of intensities of emissions at the plurality of pre-determined wavelengths and emission lifetimes at each of the plurality of pre-determined wavelengths;

comparing the ascertained ratio of intensities of emissions and emission lifetimes at the plurality of pre-determined wavelengths with a security profile comprising (i) relative emission intensities at the plurality of pre-determined

wavelengths, and (ii) emission lifetimes at each of the plurality of pre-determined wavelengths; and

indicating a successful validation in the event of a match.

60-63. (canceled)

64. (currently amended) An optically detectable security feature comprising: at least one rare earth dopant having an intrinsic set of energy levels;

a glass or plastic particle, other than an optically stimulable glass, incorporating the at least one rare earth dopant, where interaction between the particle and the at least one rare earth dopant is such that the intrinsic set of energy levels is modified to provide a new electronic energy level profile that allows transitions different to those allowed by either the rare earth dopant by itself or the undoped glass or plastic particle; and

a security profile associated with the new electronic energy level profile, where the security profile comprises (i) a ratio of emission intensities at a plurality of pre-determined wavelengths of the doped glass or plastic particle, and (ii) an emission lifetime at one of the plurality of pre-determined wavelengths which is different to an emission lifetime at another of the plurality of pre-determined wavelengths ~~different emission lifetimes at the plurality of pre-determined wavelengths~~, where the emission intensities and the emission lifetimes are measured in the absence of excitation.

65. (new) An optically detectable security feature comprising:

at least one rare earth dopant having an intrinsic set of energy levels;

a silicon dioxide based particle incorporating the at least one rare earth dopant, where interaction between the particle and the at least one rare earth dopant is such that the intrinsic set of energy levels is modified to provide a new electronic energy level profile that allows transitions different to those allowed by either the rare earth dopant by itself or the undoped silicon dioxide based particle; and

a security profile associated with the new electronic energy level profile, where the security profile comprises (i) a ratio of emission intensities at a plurality of pre-

determined wavelengths of the doped silicon dioxide based particle, and (ii) an emission lifetime at one of the plurality of pre-determined wavelengths which is different to an emission lifetime at another of the plurality of pre-determined wavelengths.